

PATENT COOPERATION TREATY

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PCT

From the
INTERNATIONAL SEARCHING AUTHORITY

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY
(PCT Rule 43bis.1)

Date of mailing
(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No
PCT/GB2004/001208

International filing date (day/month/year)
19.03.2004

Priority date (day/month/year)
21.03.2003

International Patent Classification (IPC) or both national classification and IPC
E02B3/06

Applicant
THE ENGINEERING BUSINES LIMITED

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☒ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis 1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2 FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66 1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220

3. For further details, see notes to Form PCT/ISA/220

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/GB2004/001208

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
 - ☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
 - ☐ a sequence listing
 - ☐ table(s) related to the sequence listing
 - b. format of material:
 - ☐ in written format
 - ☐ in computer readable form
 - c. time of filing/furnishing:
 - ☐ contained in the international application as filed.
 - ☐ filed together with the international application in computer readable form.
 - ☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/GB2004/001208

Box No. II Priority

1. ☒ The following document has not been furnished:

- ☒ copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66 7(a)).
☐ translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).

Consequently it has not been possible to consider the validity of the priority claim. This opinion has nevertheless been established on the assumption that the relevant date is the claimed priority date.

2. ☐ This opinion has been established as if no priority had been claimed due to the fact that the priority claim has been found invalid (Rules 43bis.1 and 64.1). Thus for the purposes of this opinion, the international filing date indicated above is considered to be the relevant date.
3. Additional observations, if necessary:

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	3, 7 8 12 13
	No: Claims	1 2 4 5 6 9 10 11 14 15 16
Inventive step (IS)	Yes: Claims	13
	No: Claims	1-12, 14-16
Industrial applicability (IA)	Yes: Claims	1-13
	No: Claims	

2. Citations and explanations

see separate sheet

STATES. PRIORITY DOC
HAS NOT BEEN FURNISHED

- BUT 23/77 filed with
Application. . . .

PCT/18/304 received
May 2004.

Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

Reference is made to the following document/s/:

D1: US - A - 4 027 486

D2: DE - A - 23 41 846

D3: US - A - 5 010 940

1.1 D1 discloses (reference signs relating to this document):

an apparatus for creating a local reduction in wave height comprising: an upper surface portion 40 operatively disposed at or near the water surface, and a plurality of drag inducing elements 42, 14 disposed below the upper surface portion, which elements are collapsible or compressible (cf. col.3, l.19-22) when the apparatus is not in use.

1.2 Thus the present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

1.3 The same features can be found in documents D2 and D3.

2.1 The features of the following dependent claims are either known from one of the documents or do not contain any features suitable to support an inventive step in combination with the features of claim 1:

- claim 2: the upper surface portion comprises a plurality of flexibly linked sections, cf. D1, col.5, l.17-19;
- claim 3: obvious alternative design of upper portion;
- claim 4: a plurality of flexible fluid retaining structures, cf. D1, col.5, l.13-17: tanks 14 positioned between tank 40 and the lowermost tanks;
- claim 5: a grid of tubes, cf. D1, Fig. 1: the intermediate tanks 14 form a horizontal grid of fluid retaining structures of the apparatus;
- claim 6: the flexible structures are filled with fluid under pressure, cf. D1, col.29-30: the tanks contain air and/or water which will always be under a certain pressure;
- claim 7: a pump for filling the flexible structures, cf. D3, col.5, l.1-6;
- claim 8: the fluid being water, cf. D3, col.5, l.1-6;
- claim 9: the drag inducing elements are formed from a compressible material, cf. D1,

col.3, l.19-22;

- claim 10: the drag inducing elements being drogue anchors, cf. D2, p.1, par.1;
- claim 11: the drag inducing elements are inflatable, cf. D3, col.4, l.43-48;
- claim 12: inflating chambers with water, cf. D3, col.5, l.1-6;
- claim 13: alternative construction of fluid delivery to drag inducing elements;
- claim 14: the leading end of the apparatus is inclined, cf. D2,
- claim 15: apparatus with deployment vessel, storage device and means for paying out and recovering said apparatus, cf. D3, col.7, l.31-37;
- claim 16: storage reel, cf. D3, col. 7, l.35-37.

2.2 The subject-matter of these claims does not fulfill the requirements of either Article 33(2) or Article 33(3) PCT.